



**Main Street Bridge**  
Wray, CO

**WHY THIS PROJECT IS RELEVANT**

- Robust, early planning process
- High traffic area
- Value engineering
- Extensive public outreach
- Collaboration with engineer
- Bridge and box culvert construction
- Utility coordination and relocation

**PROJECT SIZE**

8" Water Line - 2561 LF  
 Concrete Paving - 12,640 SY  
 Curb & Gutter - 3783 LF  
 7'x5' Box Culvert - 300 LF  
 Earthwork - 1200 CY

**INITIAL/FINAL COST**

\$5,425,196/ \$5,431,196

**CHANGE ORDERS**

5 owner initiated

**CONTRACT SCHEDULE**

September 2020 - April 2021

**ACTUAL SCHEDULE**

September 2020 - April 2021

In 2018, the City of Wray undertook the process of revitalizing their Main Street and undertook a series of projects as part of the infrastructure improvements. Key elements of the street including the concrete paved roadway, bridge structure, and waterline had all surpassed their useful lifecycles and the existing infrastructure did not include a stormwater collection system. The project would also increase parking, address current ADA standards, and provide lighting upgrade including integrated wiring for seasonal lighting as well.

The scope of work included removal and replacement of the existing box culvert at the Republican River with a precast box culvert, removal of the Mill race bridge including replacement with a 36" culvert, replacement of existing 8" water line, service lines and appurtenances, installation of 18" sewer lines, inlets and manholes, and removal and replacement of street paving and sidewalks.

The City's Business District revitalization vision meant that input from the local businesses and residents were crucial because of the vastly different ideas and concerns. Zak Dirt hosted a town hall meeting and identified four categories of concern: loss of easy access and therefore business; impacts to utilities for extended periods of time; the impacts of vibration on the historic buildings; and shot down of the river through this section. Zak listened to these concerns and developed a series of solutions and innovations for the project.

The project encompassed six city blocks, five of which housed business. Our original plan was to phase the project block by block to minimize the overall duration of the disruption. However, to address the concerns, we developed a plan, approved by the city to sacrifice some efficiencies to decrease the impact that disruption had on each individual business.



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**REFERENCES**

**OWNER**

Jerry Buchanan  
City of Wray  
970-332-4412  
jbuchanan@cityofwray.org

**ENGINEER**

John Enochs  
Diamond Back Engineering  
and Surveying  
303-985-4204  
johne@diamonbackeng.com

**SELF PERFORM**

82%

**PROJECT TEAM**

Jesse Sewczak  
Ben Jordan  
Mike Sewczak  
Dan Sewczak  
Nathan Everett

**DELIVERY METHOD**

Design-Bid-Build requiring heavy collaboration with design team

**NUMBER OF CLAIMS**

0

This included working with the engineer to redesign the waterline tie ins and rephasing the order in which construction happened. This allowed for businesses to maintain parking within one block of their shops and shortened the original distance that customers would need to walk to there destination. After the original section was completed successfully, the City allowed us to additionally overlap portion of the pipe work with the following block to increase the speed of the project.

The bridge structure itself proved more challenging, in addition to the community concerns, there was an issue with space to stage and complete the work. One key issue was that the existing retaining walls had collapsed since the project was designed, and the new precast box culverts would not fit. Once again, Zak Dirt worked in collaboration with the engineer to develop a solution - replacing the precast structure with a cast-in-place box culvert for the roadway and designing a new cast-in-place U channel for the section outside of the roadway. This solution allowed flexibility in width to accommodate the collapsing walls. Our active involvement in the design process allowed for us to us to address the unforeseen condition of the collapsed walls, improve the functionality of the new walls, and address the busienss owners' desire to have an open channel without any additional cost to the project.

The existing waterline was failing at certain valves and the system was not looped having a major impact on critical community resources such as the hospital and the school which could only store enough water to last a portion of a day. To address this issue Zak worked with the engineer to move the waterline away from the existing line as well as make modifications to the old line to leave the existing line in operation during construction.

Due to our continuous communication with City officials, business owners, resident and the engineer, the project exceeded everyone's expectations.